Looseleaf No. 98

PREHISTORIC INVASION OF FRANCE

by

ROBERTA CRAMER
Raymond Foundation

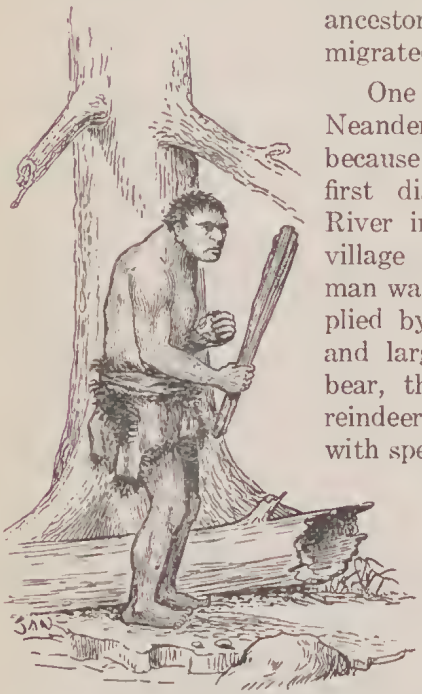
MUSEUM STORIES

CHICAGO NATURAL HISTORY MUSEUM

Series XLIII, No. 1 **October 7, 1944**

PREHISTORIC INVASION OF FRANCE

The land we now call France has been invaded many times during its history. The earliest invasion of which we have any record began about 250,000 years ago and continued for several thousand years, when peoples whose ancestors may have lived in Asia migrated into western Europe.



Neanderthal man—not a very handsome creature

One of these early peoples was the Neanderthalers, a name given to them because remains of their homes were first discovered along the Neander River in western Germany, near the village of Neanderthal. Neanderthal man was a hunter whose food was supplied by various kinds of small game and larger animals such as the cave bear, the woolly rhinoceros, and the reindeer. These animals were killed with spearheads of chipped stone. The climate of Europe was cold at that time and because of the cold Neanderthal man sought the shelter of caves and the entrances of caves. As another protection he may have worn clothing made from the skins of animals, but his clothing probably was not cut and seamed because no one has found needles made in this period. He had a knowledge of fire, but we do not know if he used it for warmth, or to cook his food, or to scare animals away from the caves.

Neanderthal man was not a very handsome creature. He was short and stocky, about 5 feet 4 inches tall, with huge, beetling brow ridges, a big nose, and almost no chin. He had a long, flat skull and a short, thick neck. His legs were short and stout, and the bones between the hips and the knees were slightly curved.

Another man of the Old Stone Age was the Cro-Magnon, who appeared in Europe while the Neanderthal people were still in existence. Cro-Magnon peoples are so-called because their skele-

tons were first discovered at a small town of that name in southern France. Whereas Neanderthal man was short, Cro-Magnon man was tall, even taller than the average man today. The average Cro-Magnon was a little more than six feet tall. If a Cro-Magnon man were living today and were dressed in modern clothes and sent out on Michigan Avenue in Chicago, he would not arouse any great amount of curiosity, for he would look very much like the other people on the street. But in his day he did not wear clothing made from woven materials; his clothes were made of animal skins. We have found excellently made bone needles that were of Cro-Magnon manufacture, and so we know that these people must have cut skins to a pattern and sewed them with the sinews of animals.

Cro-Magnon man wore clothing and made his home in caves to protect himself from the cold. He knew how to make fires, and he may have used them for warmth and for cooking. He used fire for light, for he made stone lamps, probably using the fat from animals for fuel and a piece of dried moss for a wick. He had tools of flint, and in addition he made objects of obsidian, carved bone, and reindeer horn. Hunting and fishing supplied his food.

The Cro-Magnon peoples were the cave artists who decorated the walls and ceilings of caves with paintings and sculptures of animals. Most of the animals pictured are those that could be used for food. Perhaps the people believed that if they were to paint a picture of an animal before a hunt, it would serve as a prayer for good luck on the hunt.

Neanderthal man and Cro-Magnon man lived before the dawn of written history. Therefore, their life stories are incomplete. The little that we know about them has been reconstructed from a study of their homes and a careful examination of the tools and weapons that we have found buried with them.

NOTE: Hall C contains a series of groups of early European peoples, including Neanderthal and Cro-Magnon man.

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Loose-leaf No. 99

THE SUN AND ITS WORK

by

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MUSEUM STORIES

CHICAGO
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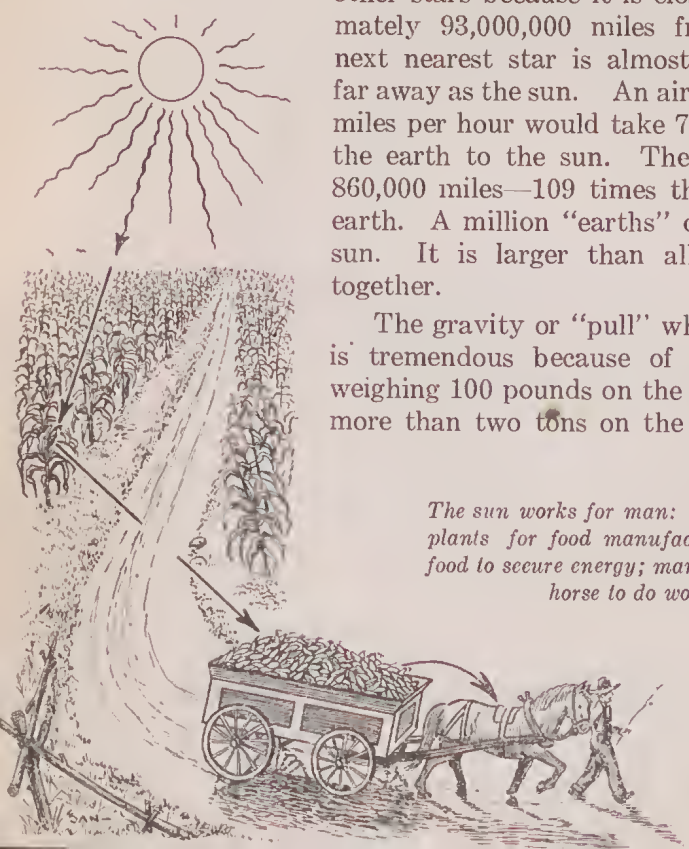
THE SUN AND ITS WORK

The sun is a star—a huge furnace of glowing gases so hot that we could not approach it within millions of miles without being burned to a crisp. Its surface temperature is about 11,000° F., hotter than any temperature ever produced by man, and the temperature down in its depths is higher than any temperature ever measured. If the sun were as close to us as the moon, the water of the oceans would boil away and the earth would melt.

Nothing on the sun is solid. Such intense heat turns all liquids and solids into gases. Over the sun's surface these gases whirl and seethe into monstrous storms, often sending out streamers of white-hot gases thousands of miles high. Astronomers believe that the sun gets much of its heat from the contracting of these gases; it does not actually burn like a bonfire. People sometimes wonder if the sun will grow cold, for it is cooling slowly, but the enormous length of time that must elapse before there is any difference in the earth's temperature is beyond man's imagination.

The sun is a star of average size. It appears to be larger than other stars because it is closer. It is approximately 93,000,000 miles from us while the next nearest star is almost 300,000 times as far away as the sun. An airplane traveling 150 miles per hour would take 70 years to go from the earth to the sun. The sun's diameter is 860,000 miles—109 times the diameter of the earth. A million "earths" could fit inside the sun. It is larger than all the planets put together.

The gravity or "pull" which the sun exerts is tremendous because of its size. A man weighing 100 pounds on the earth would weigh more than two tons on the sun. This "pull"



The sun works for man: It furnishes energy to plants for food manufacture; horses eat plant food to secure energy; man uses the energy of the horse to do work for him.

holds the earth and the other planets a certain distance from the sun. The planets revolve around circular paths with the sun as the center.

Does the sun really "rise" and "set"? It does not go up or down nor does it turn its light off and on. It unceasingly lights one half of our earth. As the earth rotates, the side on which we live swings into and out of this lighted area, receiving alternately night and day.

Our seasons depend on sunshine. Winter is cold since the short days give us less sunlight and the sun's rays reach us on a slant. Slanting rays produce less heat than direct ones. You can set a paper on fire if you focus the sun's rays with a magnifying glass directly over one spot; but if you tip the glass, slanting the rays over fifty times as much paper, the rays will not give enough heat to produce fire.

Heat will not travel 93,000,000 miles, so the sun does not send us heat such as we can feel. It sends radiant energy which turns to heat when it strikes rough or dark materials. The earth receives approximately one-half of one billionth of all the sun's radiant energy, but even that small amount makes life possible on earth.

Sunshine gives green plants energy with which to manufacture food. They take materials from the soil, and water and air, and, with the help of a green substance called chlorophyll, manufacture sugar and starch, some of which they store in their roots and stems and leaves. Animals eat plants, and we eat animals and plants to give us life and energy for our work and play. The ultraviolet rays in sunshine can prevent certain diseases if it shines on our bodies. Sunshine also helps to kill many harmful bacteria.

Most of the energy on earth comes from the sun. It evaporates tons of water, forming clouds and causing rains which enlarge rivers used to run dynamos for producing electricity. Coal and wood, fuels which help to run machinery, are made of plants that trapped the sun's energy.

NOTE: Exhibited in Hall 35 is a model of the Solar System showing the relative sizes and positions of the planets in relation to the sun.

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Looseleaf No. 100

THE DISCOVERY OF THE NEW WORLD

by

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MUSEUM STORIES

CHICAGO
NATURAL
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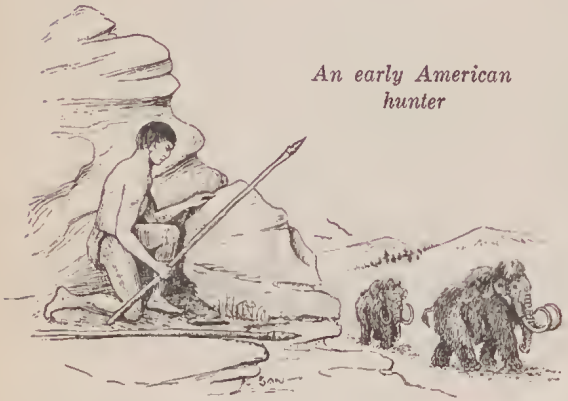
THE DISCOVERY OF THE NEW WORLD

There are many fairy tales, guesses, and yarns concerning the origin of the American Indian and the peopling of the New World. Not a shred of evidence has been found as proof that the American Indian originated in the New World (no modern or fossil forms of man-like apes have ever been found in the Americas); therefore, we believe that the inhabitants of the New World must have come from the Old.



An early American hunter

Though of varied racial characteristics, the American Indians do have in common the straight black hair, high cheek bones, yellow-brown or red-brown skin, dark eyes, large face, and projecting jaws of the Mongoloid or yellow-brown family. We believe that the Indian must be of Asiatic origin. The question arises as to how and why he emigrated from Asia to the American continent.

With the limited and primitive methods of transportation at the disposal of prehistoric man, it is quite certain that he must have entered by the easiest and shortest route. The only region in the New World that lies near enough to the Old is that part of Siberia which is along Bering Strait. The least distance between South America and Africa is about fourteen hundred miles, and the distance between the closest Pacific islands and the west coast of South America is over two thousand miles. On the other hand, on clear days groups of settlers in Siberia could easily have seen the opposite shore of Alaska. They probably crossed to the New World by boat or even on foot, because the strait, only sixty miles wide, freezes over a few months each year.

These nomadic people of Siberia had earlier been attracted to northern Asia by the superabundance of game, which insured them a steady food supply. As the years passed, the glacial ice that barricaded animals in northern Asia began to recede. As a result, musk oxen, prehistoric horses, mammoths, mastodons,

camels, and other game animals, freed from their grazing grounds in the tundra, began to spread in all directions. Man probably followed the chase, as many nomadic peoples do, and some groups may have surged up into northeastern Siberia and spilled over into North America. Need for new hunting and fishing grounds, dissatisfaction, "wanderlust," and pressure from neighboring groups of people have always been reasons for migrations of man and beast. Once here, in the New World, where food was more plentiful and climate more inviting, man stayed.

Of course, the Americas were not settled within a short time or by one group of people. Hunters travel in small bands, and it is likely that the New World was populated by "dribbles" of people crossing from Asia for a period of many years.

As the people multiplied, they spread ever east and south, and, when Columbus arrived, the greater part of both the Americas was well settled. The population of North America alone is estimated to have been about a million or a million and a half.

Just how long it took these invading bands to spread all over two continents is not known. It is estimated that if a tribe of people moved camp but three miles each week, the southernmost tip of South America could be reached in about seventy years. Such an event probably never took place, but one can see that civilizations of the New World are not necessarily extremely old.

From the study of Maya inscriptions and ancient Peruvian civilization, and from the examination of tree rings in southwestern United States we have accurate evidence that none of the highest civilizations of the New World could be dated at much earlier than A.D. 1. Scientists who have studied the problem of the origin of Indian corn tell us that even these native American plants could have been developed in a comparatively short time.

We know that man has lived in the Americas for a few thousand years. When did he arrive in the New World? Geologists agree that this must have depended largely on the continental glaciers. Without corridors or passages through the ice, man could not have crossed the glaciers. Travel would have been extremely dangerous, and no plant or animal life could have existed on the glacier to supply the travellers with food. Therefore, the migrations must have been limited to periods of mild climate. Geologists estimate that the present period of mild climate goes back 10,000 or 20,000 years.

Therefore, it seems likely that man came over from Asia to America by way of Bering Strait about 20,000 years ago.

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Looseleaf No. 101

SHARKS

by

MIRIAM WOOD
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MUSEUM STORIES

CHICAGO
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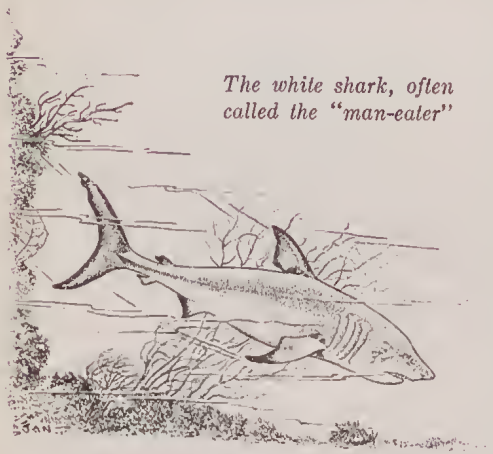
SHARKS

Shark stories, like many other fish stories, grow and become exaggerated in repeated tellings until some tales become so fanciful that little truth remains. Sailors of early days, frightened by the size, speed, and greedy appetites of some of the sharks, have added colorful misinformation often difficult to refute. In sifting out the untruths from these handed-down tales, these facts remain: that the sharks include the biggest fish in the world (whale shark, 50 feet long); that many sharks do have large mouths filled with ferocious-looking jagged teeth; that they are speedy swimmers; that some are capable of and do attack human beings; that some sharks are as small as six inches, and that prehistoric sharks are believed to have reached a length of 100 feet.



The white shark, often called the "man-eater"

Sharks differ from other fishes mainly in their skeletons, which are cartilage—never true bone like those of other fishes. Sharks are covered with rough,tooth-like scales (dermal denticles) instead of the smooth, overlapping scales of other fishes. Each minute shark scale or denticle is very much like a tooth imbedded in the skin, and these scales make the shark skin very rough. Sharks also differ from other fishes in having several gill slits on either side of the head instead of having the gills covered over by an "operculum" as is the case in bony fishes.

In appearance a typical shark is a long, slender, and often graceful fish with crosswise slit-like mouth on the under side of the head. The mouth is well supplied with teeth, anywhere from a few hundred to several thousand in each jaw. As the teeth in one row are used, become broken, and fall out, a new row moves into place from the inside, and so on. The teeth are constantly being shed and replaced. Contrary to common belief, the shark does not chew with his teeth nor does he have to turn on his back to grasp an object—he raises his head slightly, perhaps even out of the water, grasps the prey with his teeth and swallows it whole.

Sharks are found in almost all the seas of the world, at various depths of water and even in some rivers. Most sharks are very active fishes, hunting and chasing other fishes and preying upon them for food; they also eat small mammals of the sea and shrimp-like creatures. Sharks seem to hunt more by a keen sense of smell than by anything else, although it is believed that they can see fairly well for a distance of several feet.

No doubt many of the gruesome stories of man-eating sharks are untrue, but authentic records have been made of a number of such incidents. Most of these attacks have been made by sharks in tropical waters, but occasionally sharks wander close to the beaches along the shores of the United States, and frightened people have magnified the damage done. The shark most frequently referred to as the "man-eater" is the white shark, which often attains a length of 30 feet. It is a fearless and powerful swimmer, usually found in the open ocean but sometimes close to land. It could and no doubt does devour a person if one happens to be handy. Its large mouth is filled with good-sized, sharp, triangular-shaped teeth that are responsible for the horrible wounds in the limbs of luckless bathers. Natives around Australia and New Zealand especially fear the white shark and have named it the "White Death."

The biggest shark, the 50-foot whale shark, is less like a typical shark than all the others. Its mouth is closer to the end of the head, it is less speedy in the water, and it does not seem to be so aggressive. It is not harmful in any way unless it accidentally bumps into a person or a boat, and then only the great weight of the fish or perhaps the lashing of the huge tail causes damage. This shark swims through the water with its enormous mouth open, and small forms of life are caught by strainers inside the mouth while the water pours out through the gill slits on either side.

The commonest sharks are the small dogfishes, which are speedy and aggressive in obtaining food, but do not attack human beings. They are frequently seen by sailors and fishermen close to our shores along the Atlantic coast. They come in great schools or packs of hundreds and thousands, very much like wild dogs; they are voracious in their hunger for fish and will tear into the fisherman's net, taking the fish and ripping the net to pieces.

The smallest shark on record is a deep sea species from close to the Philippine Islands. It is less than six inches long and jet black in color except for the fins, which are partly white.

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Looseleaf No. 102

WINTER IN OUR PARKS

by

VELMA WHIPPLE
Raymond Foundation

MUSEUM STORIES

CHICAGO
NATURAL
HISTORY
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WINTER IN OUR PARKS

AN OUTLINE OF THINGS TO LOOK FOR IN OUR PARKS IN THE WINTERTIME

Pine and poplar branches

TREES

Most trees lose their leaves in winter (elm, willow, and maple).

A few trees keep their leaves throughout winter (white oak).

Some trees are evergreen and lose only a few needles at a time throughout the year (spruce, pine, fir, juniper, hemlock).

Some trees have opposite branching (maple, ash).

Some trees have alternate branching (elm, willow, oak, poplar).

The bark of some trees is very rough (hickory), while that of others is very smooth (ailanthus or tree of heaven).

Some trees have very interesting buds in winter (basswood, red; cottonwood, sticky).

Elm, willow, and poplar are very common in our parks.

People who really know trees (as woodsmen and foresters) can recognize them in winter at a distance by their shape, or at close range by their buds, bark, leafscars, or even by the smell of a wood chip.

Burdock

WEEDS

The grasses and flowers of our parks almost disappear during the winter, but some weeds remain sticking up through the snow, dried and brown. Many of these weeds have spiny fruits or seeds that are an important source of food for birds in winter (cocklebur, Canada thistle, burdock, pigweed).

An oriole's nest

NESTS

Birds' nests that are almost hidden amidst the summer foliage are easily found in the leafless shrubs and trees of winter. Since these nests will not be used again, you may investigate them to discover what kinds of materials were used (robin, oriole).

The nest of the oriole is rare but easily recognized in winter. It is often found hanging from the branches of elms.

Probably the largest and most conspicuous nests in our parks are those built as the summer homes of gray squirrels. These nests, usually high in the branches of tall trees, are made of dried leaves and twigs.

A fossil crinoid stem

ROCKS

Winter is a fine season in which to do rock collecting. There are many interesting rocks to be found in our parks, and in the Museum there are cases that may help you name your rocks.

Some of your specimens may even contain fossil records of prehistoric life.

FORMS OF WATER

Water takes many forms during winter, and the parks are fine places to see rain, sleet, ice, clouds, snow, and frost.

Have you ever kept a weather diary?

Snowflakes

STARS

The dark, clear skies of winter make star-gazing a fine nature hobby. Fortunately the brightest constellations of the year may be seen in the winter skies early in the evening. Among these constellations are the Dippers and North Star; Orion, the Hunter; Castor and Pollux, the Twins; Taurus, the Bull; Pleiades or Seven Sisters; and Cassiopeia, the Queen.

INSECTS

Many moths and butterflies spend the winter in their pupae cases (cocoon, chrysalis). Other insects remain within galls (growths on leaves and stems). Some galls look like tiny balls or apples; others resemble spiny clubs.

Three large cocoons easily seen are those of the Promethea moth (usually on lilac bushes), Cecropia (partial to apple trees), and Polyphemus (often close to the ground in willows).

Cocoon

BIRDS

The birds most likely to be seen in our parks in winter are English sparrows and other sparrows, pigeons, chickadees, brown creepers, cardinals, downy woodpeckers, starlings, juncos, gulls, ducks, nuthatches, and blue jays.

Watch especially for the feeding habits of the birds.

Gull

SUN

Each day during winter there is less time for play in the parks. The days gradually get shorter, the sun gets lower on the southern horizon, and the heat of the sun's rays less and less intense. The length of shadows changes too and measuring them at noon was one of the first steps in astronomy.

MAMMALS

The wild mammals most likely to be seen in our parks in winter are mice of various kinds, squirrels, and rabbits. You may also see domesticated animals: dogs, cats, and horses.

White-footed mouse

TRACKS

The mammals and birds listed above leave tracks in the snow.

See how many of the nature items mentioned in this outline you can observe this winter in our Chicago parks

Rabbit tracks

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Looseleaf No. 103

FACTS ABOUT FOSSILS

by

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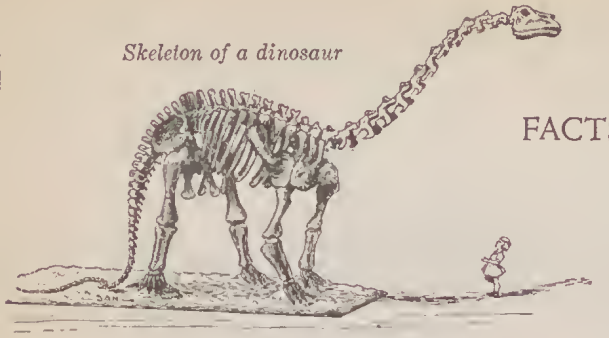
MUSEUM STORIES

CHICAGO
NATURAL
HISTORY
MUSEUM

Series XLIII, No. 6 **November 11, 1944**



Skeleton of a dinosaur

FACTS ABOUT FOSSILS

What is a fossil?

A fossil is the actual remains or record of a prehistoric plant or animal. The word "fossil" came from the Latin *fossus,* meaning "dug," because fossils are usually dug from rocks. Occasionally, however, fossils are found in ancient tar-pools, in frozen ground, or in fossil gum or amber.

Ordinarily a plant or animal cannot become fossilized unless it contains some hard part, like a shell, and is buried soon after death. Because many animals without backbones (invertebrates) contain hard parts and live in or near water where lime, sand, and mud are being rapidly deposited, they frequently become buried soon after death and therefore are abundant as fossils.

Land animals are not so likely to become fossils; instead of being buried they are usually destroyed by the elements or torn apart by carnivorous animals.

How are fossils formed?

Fossils may be divided into two large groups, actual remains and mere records or traces of former life.

First let us investigate some actual remains fossilized in frozen ground. The woolly rhinoceros and the hairy mammoth are the most spectacular examples of this type of preservation. These animals were perfectly preserved for thousands of years in the frozen wastelands of Siberia, even to their hairy coats and the plants which they had eaten as their last meal.

The mammoth was an important part of the life of Stone Age Man, for he drove the animals over cliffs into pits, killed them, and then used their flesh, hides, bones, and tusks.

Insects and spiders have been found preserved in amber or fossilized resins. They became trapped in the sticky substance and were soon covered and buried. Even the soft parts of animals buried in amber or ice were perfectly preserved.

In limestone deposits of the Chicago region many fossil seashells and other marine invertebrates are to be found. Coral structures in limestone and sandstone also fall within this group. Let us see how these fossils came to be.

Thousands of years ago, the place where Chicago now stands was covered by warm seas. In these seas lived many thousands of shell animals and corals. As the years passed, lime, sand, and mud were carried in by streams; the seas retreated, and the ocean life was buried beneath layers of rock and soil.

Skeletons of other animals were preserved in a very different manner in several locations where asphalt- or tar-pools occurred. Here the animals became mired in the sticky tar. Vultures, saber-toothed tigers, and other scavengers, hearing the cries of the victims caught in the tar, came to seize their prey and in turn were trapped in the pools. The bones of all these animals sank in the tar, which preserved them perfectly.

Bones that have "turned to stone" are another type of fossil. Bones, as you know, are soft and porous on the inside. After they have rested in the rocks for long periods of time, the bone is gradually dissolved and bit by bit is replaced by a mineral brought in by water seeping through the rocks. Thus the process of "turning to stone" is actually one of the bone's being replaced by minerals such as quartz or calcite. Most dinosaur bones are at least partially petrified and are therefore exceedingly heavy.

Coal is the actual remains of plant life of 250 million years ago preserved as carbon. If you have ever visited a coal mine, you know that the roof of the mine is often composed of shale or slate. This was originally mud that covered the coal-forming plants. In these shale roofs have been found many interesting "carbon-copies" of the plant life of long ago.

The most common of all fossils are either casts or molds of shell animals. Sometimes the shell filled with mud, which, under great pressure, turned to stone. The original shell disappeared, leaving a cast of the inside of the shell. Sometimes the shell dissolved, and the resulting cavity filled with lime or mud, providing a mold of the outside of the shell.

Other fossils are merely footprints, trails, or impressions of skins. From footprints the scientist is often able to tell much about the size and habits of prehistoric animals. He can often tell from just the prints whether the animals lived in or near water or on land, how they walked, and other interesting facts about them.

NOTE: In Halls 37 and 38 can be seen all the types of fossils mentioned in this story.

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Looseleaf No. 104

DIAMONDS

by

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MUSEUM STORIES

CHICAGO
NATURAL
HISTORY
MUSEUM

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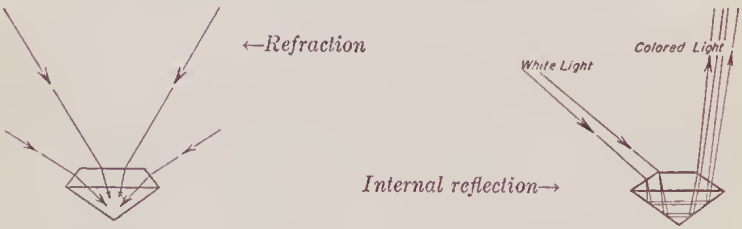
DIAMONDS

Diamonds are composed of pure carbon which has crystallized under great heat and pressure. Carbon is a common substance, found nearly everywhere and in almost everything. Scientists have never been able to manufacture artificial diamonds of sufficient size to be of commercial value, although they have produced tiny ones. Carbon prepared from sugar has been melted in iron and the mass cooled suddenly to form very small, almost microscopic, diamonds. Microscopic diamonds have also been found in steels, especially in those cooled under pressure.

The size of a diamond is measured in "carats," a unit of weight (one ounce=142 carats). The term "carat" comes from a very old method of weighing gem stones in India, where diamonds



were first discovered. There carat seeds (from a certain kind of locust tree) were used as weights because the seeds were all of even size.

"Fine" diamonds are transparent, like a drop of dew, and may have a faint tinge of color, which is due to impurities in the carbon. Pale yellow, light brown, gray, or black are the usual colors in diamonds of poor quality ("off-color" diamonds). "Fancy" diamonds are stones having a great deal of color—bright blue, green, yellow-brown, yellow, pink, or even red.

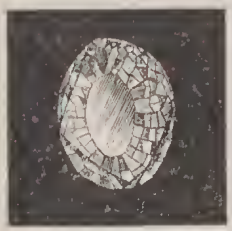
However, the greatest beauty of a diamond is not its color, but the tricks it plays with light. These tricks are called "refraction." Let's explain refraction this way: If you put a straight stick down into a pool of water, you will notice that the stick seems to be bent at the point where it leaves the water. This appearance of "bending" is caused by the bending of the light rays as they pass from the air into the water. Every transparent substance—water, glass, gem stones, and so forth—bends light rays, but in different amounts, and the diamond does so most of all. In gem stones, light coming from all directions is bent downward toward the center of the stone. When the diamond has been properly cut, the light rays strike the stone at a sharp angle and

are reflected back up through the top surface, so that the stone seems to glow from the inside (internal reflection).

When diamonds come from the mine they are called "rough" diamonds and look like frosted glass or bright pebbles. Before its true beauty is revealed, the stone must be cut. Cutting gems is both an art and a science, and people who earn their living in this way are known as lapidists. Through centuries of experimenting, lapidists have learned how to cut diamonds in the shapes which make the greatest possible use of the internal reflection of the stone to show off its beauty.

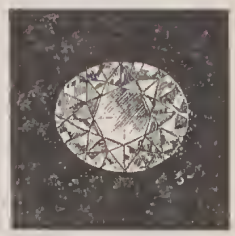
Diamonds are found in various parts of the world, but the only large diamond fields known are in India, Brazil, and South Africa. The carbonado or black diamond, used for drill points, is found only in the state of Bahia, Brazil. Commercial mining of diamonds originated in India possibly about 600 to 800 B.C., but today South Africa is the real center of the diamond industry.

The Kohinoor, the oldest and perhaps the best-known of famous diamonds, is thought to have been found in southern India almost five thousand years ago. It was owned by the Rajahs of Malwar until 1340 A.D. when it passed into the hands of India's Mogul conquerors. In 1739, when Nadir Shah, a Persian conqueror, overthrew the Mogul government, he obtained the Kohinoor through trickery. Nadir learned that the dethroned ruler, Mohammed, had hidden the diamond in his turban. He offered to restore Mohammed's possessions and, pretending friendship, suggested that they trade turbans. Because of Indian tradition, Mohammed had to accept the trade. When Nadir



Kohinoor second cut→

←Kohinoor first cut



took the turban into his tent and unwound it, the diamond rolled out onto the ground. It was even more beautiful than he had imagined. He exclaimed with delight, "Kohinoor," meaning "Mound of Light." Thus was the Kohinoor named.

In 1851 the Kohinoor was presented to the Queen of England. When it reached London, it was recut to make it appear more brilliant.

Looseleaf No. 105

DODOS AND THEIR RELATIVES

by

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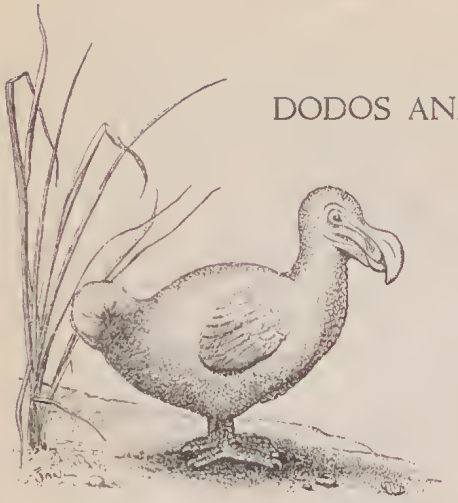

The Mauritius Dodo

Did you ever hear someone say, "He's an old dodo," or "He's as dead as a dodo," and wonder what a dodo is? No person today has seen a live dodo, for the last one of which there is any record died between 1750 and 1801.

So fabulous-sounding are the stories and so little-known are the facts about dodos that many people have thought that these birds were mythical. But dodos really did exist. We learn about them from the journals of early navigators and from Flemish painters of the early seventeenth century, who show dodos with other animals on their canvases. It is certain that at least two live dodos were brought to Europe, and no doubt these were seen by the Flemish painters. One of the dodos was shown in London in 1638; but there is no complete specimen of a dodo in existence. There are, however, one or two incomplete skeletons and a few miscellaneous bones in European, Danish, and English museums.

Dodos, from the tragedy of their extinction and the rarity of their remains, are thus among the most famous of birds. They lived on three small islands in the Indian Ocean southeast of Madagascar, and these islands were the only places in the world where dodos were found. Because they had no enemies before the coming of man to their islands, they led a comparatively easy and fearless life. They were large birds incapable of prolonged flight. They belong to a family of birds related to pigeons and, like pigeons, they probably ate the seeds and insects they found on the ground. Large, flightless birds have developed in various parts of the world where there is a comparative lack of predatory enemies, and they lead a protected life until enemies, like man in the case of the dodo, endanger their existence.

There were two varieties of dodo, the Mauritius dodo (extinct in 1861) and the Reunion dodo (extinct between 1750 and 1801), as well as a near relative, the dodo-like solitaire (extinct in 1770), all of them extinct by the end of the eighteenth century.

The Mauritius dodo, from the island of Mauritius, was a gray bird somewhat larger than a turkey. Its wings were small, with short and soft feathers like those of an ostrich; its tail feathers were a few "curling plumes." It was a heavy, ungainly creature, slow of movement, with short, stocky legs. Perhaps its outstanding feature was the heavy, enormous beak, which it probably used for crushing food. Being unable to fly, and unacquainted with the need for self-protection, dodos were easy prey to sailors visiting the island, and since three or four birds would afford a meal for an entire crew, the birds were slaughtered for fresh meat. Although other birds might have made better eating, the size of the dodo and the ease with which it was taken soon reduced its numbers. The birds laid but one egg a year and these also were considered good eating by the sailors. With the coming of settlers and the introduction of pigs and monkeys to the island, nesting birds were molested and, unable to cope with the changing conditions, this species became extinct about 1681.

The Reunion or Bourbon dodo was a white bird with a less heavy beak than its relative. It became extinct between 1750 and 1801. A single living specimen was sent to Europe in 1740.

From Rodriguez Island came the solitaire, a somewhat slimmer bird than its two dodo cousins and of this bird also there exists today no complete skeleton. Its extinction in 1770 was caused by man and the animals he introduced to the island. No living specimen of the solitaire ever reached Europe.

Although living dodos were brought to Europe as curiosities and placed in zoos, and although there exist paintings and drawings made from these live birds, and travelers to the islands have left descriptions of the birds, our present knowledge does not come from actual specimens, and for some time modern scientists wondered whether such a bird ever really existed. Recently in marshes on the islands a few fossilized bones of dodos have been uncovered, verifying the fact that such birds actually did live.

NOTE: In Hall 21 are modern flightless birds and a restoration of the dodo. In Hall 38 are skeletons of prehistoric flightless birds.

This page is for your own notes and illustrations